

REMARKS

I. Status of the Claims

Prior to the above amendment, claims 1, 3-40, and 42-58 were pending. Claims 4, 6-11, 21-39 and 48-58 are withdrawn from consideration by the Examiner. By the above amendment, claims 3, 5, 41 and 42 are cancelled. Thus, claims 1, 12-20, 40 and 43-47 are now pending and under consideration on the merits.

Claim 1 was amended to recite, *inter alia*, the features of previous claims 3 and 5, with the exception of oxides, silicates, and hydroxides. Support for this amendment may be found in the as-filed specification and claims, for example, in original claims 3 and 5.

Similarly, claim 40 was amended herein to recite, *inter alia*, the features of previous claims 5 and 42, with the exception of oxides, silicates, and hydroxides. Support for this amendment may be found in the as-filed specification and claims, for example, original claims 5 and 42.

Claim 44 was amended to correct a minor grammatical error. Claims 18 and 47 have been amended to more clearly recite that the claimed resin compatible coating has a specified LOI and the claimed non-degreased fabric has a specified permeability. Support for these amendments may be found in the as-filed specification and claims. For example, support for these amendments may be found at page 61, lines 23-31 of the as-filed specification.

Accordingly, Applicants submit that the above amendments raise no issue of new matter.

Applicants thank the Examiner for the withdrawal of the prior applied 35 U.S.C. §103(a) rejection of claims 1, 3, 13-20, 40 and 42-47 in view of Japanese Patent Publication No. 1-249333 ("Nagamine"). Office Action, page 2.

In the present Office Action, the Examiner rejects claims: 18 and 47 under 35 U.S.C. § 112, second paragraph (*Id.* at 6); claims 1, 3, 5 and 17 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 3,615,303 ("Singer") (*Id.* at 2); and claims 1, 3, 5, 12-17, 19, 20, 40 and 42-46 under 35 U.S.C. § 103(a) as being unpatentable over Japanese Patent Publication No. 4-307787 ("Iketani") in view of Nagamine (*Id.* at 3-5). Applicants respectfully disagree with and traverse each of these rejections for at least the following reasons.

II. Response to Claim Rejections

A. 35 U.S.C. § 112, second paragraph rejection of claims 18 and 47

The Examiner asserts that claims 18 and 47 are indefinite, because "it is not clear if [the claimed air permeability] is in reference to the [resin compatible] coating per se, or if this limitation is in reference to the fabric having a resin compatible coating on at least a portion thereof." *Id.* at 6. Although Applicants do not necessarily agree with the Examiner, claims 18 and 47 were amended herein so as to more clearly indicate that the claimed at least one fabric exhibits a specified air permeability. The applied § 112, second paragraph is now moot, and should be withdrawn.

B. § 102(b) rejection of claims 1, 3, 5 and 17

The Examiner alleges that Singer anticipates the subject matter of claims 1, 3, 5 and 17. *Id.* at 2 (particularly noting example 4 of Singer). Insofar as this rejection

pertains to claims 3 and 5 it is moot, as these claims are cancelled herein. With respect to claims 1 and 17, Applicants respectfully disagree for at least the following reasons.

To establish anticipation under 35 U.S.C § 102, the Examiner must demonstrate that a reference teaches each and every element of a claim. See M.P.E.P § 2141. A claim is anticipated under § 102 only if each and every element, as set forth in the claim, is found in a single prior art reference. M.P.E.P. § 2131. The Examiner has failed to meet this burden for at least the following reasons.

Present claim 1 recites, *inter alia*, “[a] reinforced laminate... comprising: (a) a matrix material; and (b) at least one non-degreased fabric...wherein at least a portion of the fabric has a resin compatible coating... and the resin compatible coating comprises a plurality of particles, wherein said particles are formed from [the listed materials.]”

Claim 1.

Contrary to the Examiner’s assertions, Singer does not teach a reinforced laminate comprising the claimed resin compatible coating containing a plurality of particles, wherein the particles are formed from the claimed materials.

Singer discloses abrasive fabrics comprising for dry grinding or wet grinding. Singer, column 2, lines 12-17. These fabrics include a prefinished fabric 1, an intermediate layer 2, an abrasive particle binder 6 consisting of a phenolic resin based binder 4, a covering binder 5, and a deposit of abrasive particles 3. *Id.* at column 3, lines 10-20 and Figures 1-7. None of these layers, however, qualify as the claimed at least one resin compatible coating comprising a plurality of particles.

First, as shown in Figures 1-9 of singer, intermediate layer 2, although positioned between prefinished fabric 1 and abrasive particle binder 6, does not contain a plurality

of particles. See Singer, Figures 1-9 and column 3, lines 74-75 (“intermediate filler-free layer according to the invention 2[.]”) Thus, it is clear that intermediate layer 2 of Singer does not qualify as the claimed at least one resin compatible coating comprising a plurality of particles.

The abrasive particle binder 6 of Singer also does not qualify as the claimed resin compatible coating. As shown in figures 1-9 of Singer, particle binder coating 6 is always disposed above intermediate layer 2. See Singer, figures 1-9. In contrast, the claimed invention recites that “at least a portion of **the fabric** has a resin compatible coating...” Present Claim 1. Thus, abrasive particle binder 6 of Singer cannot be considered the claimed at least one resin compatible coating, because it is not positioned on a portion of the disclosed fabric.

With respect to example 4 of Singer, this example also does not disclose each and every element of the present claims. In this example, Singer discloses impregnating a non-desized gray fabric with a finish consisting of, *inter alia*, an animal hide glue and kaolin, and subsequently coating the finished fabric with an epoxide resin. Singer, column 5, example 1 and column 10 example 4. the finish layer of this example, like the other layers of Singer discussed above, does not correlate to the claimed at least one resin compatible coating comprising a plurality of particles, wherein the particles are formed from the claimed materials. See present claim 1. Although the disclosed finish layer of example 4 contains particles, those particles are manufactured from kaolin, a well known aluminum silicate material. Silicates, however, are not included in the particulate materials listed in present claim 1.

For at least the foregoing reasons, Singer does not teach or disclose each and every element of present claims 1 and 17. Therefore the § 102(b) rejection of these claims is improper, and should be withdrawn.

C. § 103(a) rejection of claims 1, 3, 5, 12-17, 19, 20, 40 and 42-46

The Examiner rejected claims 1, 3, 5, 12-17, 19, 20, 40, and 42-46 under 35 U.S.C. §103(a) as being unpatentable over Iketani in view of Nagamine for the reasons set forth on pages 3-6 of the Office Action. Insofar as this rejection pertains to claims 3, 5, and 42 it is moot, as these claims are cancelled herein. With respect to claims 1, 12-17, 19, 20, 40 and 43-46, Applicants respectfully disagree with and traverse this rejection for at least the following reasons.

Several basic factual inquiries must be made in order to determine the obviousness or non-obviousness of claims of a patent application under 35 U.S.C. § 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), require the Examiner to:

- (1) Determine the scope and content of the prior art;
- (2) Ascertain the differences between the prior art and the claims in issue;
- (3) Resolve the level of ordinary skill in the pertinent art; and
- (4) Evaluate evidence of secondary considerations.

The obviousness or non-obviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 USPQ 467; *see also KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007), slip op. at 2.

Thus, in order to satisfy the initial burden of establishing a *prima facie* case of obviousness, the Examiner must first show that the prior art references teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The

Examiner must also show that there is some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references. *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998). The Supreme Court, in the recent *KSR* case, recognized that a showing of “teaching, suggestion, or motivation” could provide helpful insight in determining whether the claimed subject matter is obvious under Section 103(a). *KSR*, slip op. at 14.

In addition, the Supreme Court mandates that “[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit.” *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Federal Circuit, 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”)).

Following the *KSR* decision, the Office issued a memorandum to its technology center directors on May 3, 2007, indicating that **“in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.”** (Emphasis in original).

In the present case, the Examiner has failed to establish that Iketani and Nagamine, alone or in combination, teach or suggest the claimed non-degreased fabric, wherein at least a portion of the fabric has a resin compatible coating which is

compatible with a matrix material and comprises particles formed from the materials recited in present independent claims 1 and 40.

Iketani discloses a method for manufacturing a printed circuit substrate, comprising impregnating a glass fiber substrate with a varnish containing a filler, and then impregnating the substrate with a varnish containing no filler. Iketani, paragraph [0002]. As materials suitable for use as the filler material, Iketani discloses inorganic fillers including “short glass fibers, glass beads, glass balloons, aluminum hydroxide, aluminum oxide, clay, talc and wollastonite.” *Id.* at [0006]. As admitted by the Examiner Iketani, does not disclose a laminate comprising at least one non-degreased fabric, as claimed. Moreover, all of Iketani’s disclosed fillers are either a silicate (glass fibers, glass beads, glass balloons; clays, talc¹, wollastonite²), hydroxide (aluminum hydroxide, talc), or oxide (aluminum oxide, glass), and are thus not encompassed by the particulate materials recited in present independent claims 1 and 40.

Nagamine does not cure the deficiencies of Iketani stated above. Nagamine discloses non-greased glass fiber cloths for use in the base plate of a printed circuit board laminate. Nagamine, page 10, second paragraph. However, Nagamine is silent with respect to any resin compatible coating comprising a plurality of particulate materials, much less the claimed at resin compatible coating comprising a plurality of particulates manufactured from the claimed materials.

Thus, the resulting combination suggested by the Examiner would still fail to teach each and every element of present independent claims 1 and 40. Specifically, the

¹ Talc is a magnesium silicate hydroxide.

² Wollastonite is a calcium silicate.

combination suggested by the Examiner still fails to teach the claimed at least one resin compatible coating comprising a plurality of particulate materials formed from the materials recited in claims 1 and 40.

For at least the foregoing reasons, Iketani in view of Nagamine fail to teach or suggest each and every element of present claims 1, 12-17, 19-20, 40 and 43-46. Therefore the § 103(a) rejection of claims 1, 12-17, 19-20, 40 and 43-46 is improper, and should be withdrawn.

III. Conclusion

In view of the foregoing amendments and remarks, Applicants submit that the claimed invention are neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

By: 

Mark D. Sweet
Reg. No. 41,469

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